

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

CYWEE GROUP LTD.,

Plaintiff,

v.

MOTOROLA MOBILITY LLC,

Defendant.

Civil Action No. 17-780-RGA

MEMORANDUM OPINION

Stamatios Stamoulis and Richard C. Weinblatt, STAMOULIS & WEINBLATT LLC, Wilmington DE; Michael W. Shore, Alfonso G. Chan, Christopher Evans, Ari B. Rafilson (argued), William D. Ellerman (argued), and Paul T. Beeler, SHORE CHAN DEPUMPO LLP, Dallas, TX,

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ANDREWS, U.S. DISTRICT JUDGE:

Presently before the Court is the issue of claim construction of multiple terms in U.S. Patent Nos. 8,441,438 (“the ’438 patent”) and 8,552,978 (“the ’978 patent”). The Court has considered the Parties’ Joint Claim Construction Brief. (D.I. 51). The Court heard oral argument on December 14, 2018. (Hr’g Trans.).

## **I. BACKGROUND**

On June 16, 2017, CyWee Group, Ltd. (“Plaintiff”) filed a patent infringement action against Motorola Mobility LLC (“Defendant”). (D.I. 1). The patents-in-suit are U.S. Patent Nos. 8,441,438 (“the ’438 patent”) and 8,552,978 (“the ’978 patent”). The patents-in-suit concern an apparatus and methods capable of detecting, measuring, and calculating the movements and rotations of the axis using either a six-axis (the ’438 patent) or nine-axis (the ’978 patent) sensor module.

The parties dispute terms in claims 1, 3-5, and 14-19 of the ’438 patent. Claim 1 is representative and reads as follows:

1. *A three-dimensional (3D) pointing device* subject to movements and rotations in dynamic environments, comprising:
  - a housing associated with said movements and rotations of the *3D pointing device* in a spatial pointer reference frame;
  - a printed circuit board (PCB) enclosed by the housing;
  - a six-axis motion sensor module attached to the PCB, comprising a rotation sensor for detecting and generating a first signal set comprising angular velocities  $w_x$ ,  $w_y$ ,  $w_z$  associated with said movements and rotations of the *3D pointing device* in the spatial pointer reference frame, an accelerometer for detecting and generating a second signal set comprising axial accelerations,  $A_x$ ,  $A_y$ ,  $A_z$  associated with said movements and rotations of the *3D pointing device* in the spatial pointer reference frame; and
  - a processing and transmitting module, comprising a data transmitting unit electrically connected to the six-axis motion sensor module for transmitting said first and

second signal sets thereof and a computing processor for receiving and calculating said first and second signal sets from the data transmitting unit, communicating with the six-axis motion sensor module to calculate a resulting deviation comprising resultant angles in said spatial pointer reference frame by *utilizing a comparison to compare the first signal set with the second signal set* whereby said resultant angles in the spatial pointer reference frame of the resulting deviation of the six-axis motion sensor module of the *3D pointing device* are obtained under said dynamic environments, wherein the comparison utilized by the processing and transmitting module further comprises an update program to obtain an updated state based on a previous state associated with said first signal set and a measured state associated with said second signal set; wherein the measured state includes a measurement of said second signal set and a predicted measurement obtained based on the first signal set without using any derivatives of the first signal set.

('438 patent, claim 1) (disputed terms italicized).

The parties dispute terms in claims 10 and 12 of the '978 patent. Claim 10 is representative and reads as follows:

10. A method for compensating rotations of a *3D pointing device*, comprising:  
generating an orientation output associated with an orientation of the *3D pointing device* associated with three coordinate axes of a global reference frame associated with Earth;  
  
generating a first signal set comprising axial accelerations associated with movements and rotations of the *3D pointing device* in the spatial reference frame;  
  
generating a second signal set associated with Earth's magnetism; *generating the orientation output based on the first signal set, the second signal set and the rotation output or based on the first signal set and the second signal set*;  
  
generating a rotation output associated with a rotation of the 3d pointing device associated with three coordinate axes of a spatial reference frame associated with the *3D pointing device*; and  
  
*using the orientation output and the rotation output to generate a transformed output associated with a fixed reference frame associated with a display device*, wherein the orientation output and the rotation output is generated by a nine-axis motion sensor module; obtaining one or more resultant deviation including a plurality of measured magnetisms  $M_x$ ,  $M_y$ ,  $M_z$  and a plurality of predicted magnetism  $M_x'$ ,  $M_y'$  and  $M_z'$  for the second signal set.

('978 patent, claim 10) (disputed terms italicized).

## II. LEGAL STANDARD

“It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal quotation marks omitted). “[T]here is no magic formula or catechism for conducting claim construction.’ Instead, the court is free to attach the appropriate weight to appropriate sources ‘in light of the statutes and policies that inform patent law.’” *SoftView LLC v. Apple Inc.*, 2013 WL 4758195, at \*1 (D. Del. Sept. 4, 2013) (quoting *Phillips*, 415 F.3d at 1324) (alteration in original). When construing patent claims, a court considers the literal language of the claim, the patent specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977–80 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). Of these sources, “the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Phillips*, 415 F.3d at 1315 (internal quotation marks omitted).

“[T]he words of a claim are generally given their ordinary and customary meaning. . . . [Which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1312–13 (citations and internal quotation marks omitted). “[T]he ordinary meaning of a claim term is its meaning to [an] ordinary artisan after reading the entire patent.” *Id.* at 1321 (internal quotation marks omitted). “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314.

When a court relies solely upon the intrinsic evidence—the patent claims, the specification, and the prosecution history—the court’s construction is a determination of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). The court may also make factual findings based upon consideration of extrinsic evidence, which “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Phillips*, 415 F.3d at 1317–19 (internal quotation marks omitted). Extrinsic evidence may assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art, and how the invention works. *Id.* Extrinsic evidence, however, is less reliable and less useful in claim construction than the patent and its prosecution history. *Id.*

“A claim construction is persuasive, not because it follows a certain rule, but because it defines terms in the context of the whole patent.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that “a claim interpretation that would exclude the inventor’s device is rarely the correct interpretation.” *Osram GMBH v. Int’l Trade Comm’n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (citation and internal quotation marks omitted).

### **III. CONSTRUCTION OF DISPUTED TERMS**

1. “utilizing a comparison to compare the first signal set with the second signal set” (’438 patent, cl.1)
  - a. *Plaintiff’s proposed construction*: This term need not be construed. In the alternative only, this term may be construed as: “determining or assessing differences based on a previous state associated with the first signal set and a measured state associated with the second signal set while calculating deviation angles”
  - b. *Defendants’ proposed construction*: Indefinite
  - c. *Court’s construction*: Not indefinite / no construction necessary



This term has been construed by the United States District Court for the Eastern District of Texas. I agree with the Texas court that the term is not indefinite and that no construction is necessary. I therefore adopt the Texas court's opinion as set out. (D.I. 52, Ex. C at 14-17; *Id.*, Ex D. at 7-11).

2. "generating the orientation output based on the first signal set, the second signal set and the rotation output or based on the first signal set and the second signal set" ('978 patent, cl. 10)
  - a. *Plaintiff's proposed construction:* This term need not be construed and has its plain and ordinary meaning. In the alternative only, this term may be construed as follows: "generating from the orientation output based on (1) the first signal set (from an accelerometer), the second signal set (from a magnetometer) and the rotation output (from a rotation sensor or gyroscope) or (2) the first signal set (from an accelerometer) and the second signal set (from a magnetometer)"
  - b. *Defendants' proposed construction:* Indefinite
  - c. *Court's construction:* Not indefinite / plain and ordinary meaning

This term has been construed by the Texas court. I agree with the Texas court that the term is not indefinite and that the term shall be construed according to its plain and ordinary meaning. I therefore adopt the Texas court's opinion as set out. (D.I. 52, Ex. C at 14-17; *Id.*, Ex D. at 7-11).

3. "using the orientation output and the rotation output to generate a transformed output associated with a fixed reference frame associated with a display device" ('978 patent, cl. 10)
  - a. *Plaintiff's proposed construction:* "using the orientation output and rotation output to generate a transformed output representing a movement in a fixed reference frame that is parallel to the screen of the display device"
  - b. *Defendants' proposed construction:* "using the orientation output and the rotation output to generate a transformed output representing a two-dimensional movement in a fixed reference frame that is parallel to the screen of the display device"

- c. *Court's construction*: “using the orientation output and rotation output to generate a transformed output representing a movement in a fixed reference frame that is parallel to the screen of the display device”

This term has previously been construed by the Texas Court. I agree with the Texas court's construction and rationale. Therefore, I adopt the Texas court's opinion as set out. (D.I. 52, Ex. C at 12-14; *Id.*, Ex D. at 6-7).

- 4. “three-dimensional (3D) pointing device” / “3D pointing device” ('438 patent, cls. 1, 3-5, 14-19; '978 patent, cls. 10, 12)
  - a. *Plaintiff's proposed construction*: This term need not be construed. In the alternative only, this term may be construed as: “a handheld device that uses at least a rotation sensor comprising one or more gyroscopes, and one or more accelerometers to determine deviation angles”
  - b. *Defendants' proposed construction*: “a device that detects the motion of said device in three-dimensions and translates the detected motion to control the movement of a cursor or pointer on a display”
  - c. *Court's construction*: “a handheld device that detects the motion of said device in three-dimensions and is capable of translating the detected motions to control an output on a display”

This term has previously been construed by the United States District Court for the Eastern District of Texas. I agree with the Texas Court “that the 3D pointing device recited in the claims is not required to control a ‘cursor or pointer on a display.’” (D.I. 52, Ex. D at 2). The patent clearly contemplates that the device may indicate the movement on the display in a variety of ways including “some video effect” or “a movement pattern” in addition to the traditional cursor or pointer. ('438 patent, col. 17:36-37; '978 patent col. 21:61-65). A construction that does not require a cursor or pointer does not read “pointing” out of the disputed term. Moreover, where the intrinsic evidence provides instruction, it is inappropriate to rely on an extrinsic dictionary definition. The intrinsic evidence suggests that “pointing” is intended to reference that the device controls or directs something on the display screen. ('438 patent, col. 1:32-34;

'978 patent col. 1:36-37 (describing pointing device as a computer mouse or pad<sup>1</sup> of video game controller)).

In contrast, Plaintiffs' construction does read out the term "pointing" entirely and is therefore inappropriate. Finally, as the parties dispute the plain and ordinary meaning of the disputed term, I find that construction will be helpful to both the parties and the jury. Here, the patent specification describes only embodiments where the device is handheld and refers to prior art that was "portable." ('978 col. 1:29-30; Fig. 3, 5, 6; '438 col. 1:28-30, Fig. 3, 5, 6). Therefore, the Court construes "three-dimensional pointing device" / "3D pointing device" to mean "a handheld device that detects the motion of said device in three-dimensions and is capable of translating the detected motions to control an output on a display."

#### **IV. CONCLUSION**

Within five days the parties shall submit a proposed order consistent with this Memorandum Opinion suitable for submission to the jury.

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<sup>1</sup> The reference to a "pad" likely refers to a gamepad, joypad, or d-pad (elements of video game controllers) where the fingers are used to send input to control movement on the screen.